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AMATEUR RADIO SERVICE.

RULES AND REGULATIONS

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AUTHORITY: §§ 97.1 to 97.313 issued under 48 Stat. 1066, 1082, as amended; 47 U.S.C. 154, 303. Interpret or apply 48 Stat. 1064-1068, 1081-1105, as amended; 47 U.S.C. Sub-chap. I, III-VI.

SUBPART A—GENERAL

§ 97.1 Basis and purpose.

The rules and regulations in this part are designed to provide an amateur radio service having a fundamental purpose as expressed in the following principles:

(a) Recognition and enhancement of the value of the amateur service to the public as a voluntary noncommercial communication service, particularly with respect to providing emergency communications.

(b) Continuation and extension of the amateur's proven ability to contribute to the advancement of the radio art.

(c) Encouragement and improvement of the amateur radio service through rules which provide for advancing skills in both the communication and technical phases of the art.

(d) Expansion of the existing reservoir within the amateur radio service of trained operators, technicians, and electronics experts.

(e) Continuation and extension of the amateur's unique ability to enhance international good will.

§ 97.3 Definitions.

(a) *Amateur radio service.* A radio communication service of self-training, intercommunication, and technical investigation carried on by amateur radio operators.

(b) *Amateur radio communication.* Noncommercial radio communication by or among amateur radio stations solely with a personal aim and without pecuniary or business interest.

(c) *Amateur radio operator* means a person holding a valid license to operate an amateur radio station issued by the Federal Communications Commission.

(d) *Amateur radio license.* The instrument of authorization issued by the Federal Communications Commission comprised of a station license, and in the case of the primary station, also incorporating an operator license.

Operator license. The instrument of authorization including the class of operator privileges.

Interim Amateur Permit. A temporary operator and station authorization issued to licensees successfully completing Commission supervised examinations for higher class operator licenses.

Station license. The instrument of authorization for a radio station in the Amateur Radio Service.

(e) *Amateur radio station.* A station licensed in the amateur radio service embracing necessary apparatus at a particular location used for amateur radio communication.

(f) *Primary station.* The principal amateur radio station at a specific land location shown on the station license.

(g) *Military recreation station.* An amateur radio station licensed to the person in charge of a station at a land location provided for the recreational use of amateur radio operators, under military auspices of the Armed Forces of the United States.

(h) *Club station.* A separate Amateur radio station licensed to an Amateur radio operator acting as a station trustee for a *bona fide* amateur radio organization or society. A *bona fide* Amateur radio organization or society shall be composed of at least two persons, one of whom must be a licensed Amateur operator, and shall have:

(1) A name,

(2) An instrument of organization (e.g., constitution),

(3) Management, and

(4) A primary purpose which is devoted to Amateur radio activities consistent with § 97.1 and constituting the major portion of the club's activities.

(i) *Space radio station.* An amateur radio station located on an object which is beyond, is intended to go beyond, or has been beyond the major portion of the earth's atmosphere. (Regulations governing this type of station have not yet been adopted and all applications will be considered on an individual basis.)

(j) *Terrestrial location.* Any point within the major portion of the earth's atmosphere, including aeronautical, land, and maritime locations.

(k) *Space location.* (Reserved)

(l) *Amateur radio operation.* Amateur radio communication conducted by amateur radio operators from amateur radio stations, including the following:

Fixed operation. Radio communication conducted from the specific geographical land location shown on the station license.

Portable operation. Radio communication conducted from a specific geographical location other than that shown on the station license.

Mobile operation. Radio communication conducted while in motion or during halts at unspecified locations.

Repeater operation. Radiocommunication, other than auxiliary operation, for retransmitting automatically the radio signals of other amateur radio stations.

Auxiliary operation. Radiocommunication for remotely controlling other amateur radio stations, for automatically relaying the radio signals of other amateur radio stations in a system of stations, or for intercommunicating with other amateur radio stations in a system of amateur radio stations.

(m) *Control* means techniques used for accomplishing the immediate operation of an amateur radio station. Control includes one or more of the following:

(1) *Local control.* Manual control, with the control operator monitoring the operation on duty at the control point located at a station transmitter with the associated operating adjustments directly accessible. (Direct mechanical control, or direct wire control of a transmitter from a control point located on board any aircraft, vessel, or on the same premises on which the transmitter is located, is also considered local control.)

(2) *Remote control.* Manual control, with the control operator monitoring the operation on duty at a control point located elsewhere than at the station transmitter, such that the associated operating adjustments are accessible through a control link.

(3) *Automatic control* means the use of devices and procedures for control so that a control operator does not have to be present at the control point at all times. (Only rules for automatic control of stations in repeater operation have been adopted.)

(n) *Control link.* Apparatus for effecting remote control between a control point and a remotely controlled station.

(o) *Control operator.* An amateur radio operator designated by the licensee of an amateur radio station to also be responsible for the emissions from that station.

(p) *Control point.* The operating position of an amateur radio station where the control operator function is performed.

(q) *Antenna structures.* Antenna structures include the radiating system, its supporting structures, and any appurtenances mounted thereon.

(r) *Antenna height above average terrain.* The height of the center of radiation of an antenna above an averaged value of the elevation above sea level for the surrounding terrain.

(s) *Transmitter.* Apparatus for converting electrical energy received from a source into radio-frequency electromagnetic energy capable of being radiated.

(t) *Effective radiated power.* The product of the radio-frequency power, expressed in watts, delivered to an antenna, and the relative gain of the antenna over that of a half-wave dipole antenna.

(u) *System network diagram.* A diagram showing each station and its relationship to the other stations in a network of stations, and to the control point(s).

(v) *Third-party traffic.* Amateur radio communication by or under the supervision of the control operator at an amateur radio station to another amateur radio station on behalf of anyone other than the control operator.

(w) *Emergency communication.* Any amateur radio communication directly relating to the immediate safety of life of individuals or the immediate protection of property.

(x) *Automatic retransmission.* Retransmission of signals by an amateur radio station whereby the retransmitting station is actuated solely by the presence of a received signal through electrical or electro-mechanical means, i.e., without any direct, positive action by the control operator.

(y) *External radio frequency power amplifier.* Any device which, (1) when used in conjunction with a radio transmitter as a signal source, is capable of amplification of that signal, and (2) is not an integral part of the transmitter as manufactured.

(z) *External radio frequency power amplifier kit.* Any number of electronic parts, usually provided with a schematic diagram or printed circuit board, which, when assembled in accordance with instructions, results in an external radio frequency power amplifier, even if additional parts of any type are required to complete assembly.

SUBPART B—AMATEUR OPERATOR AND STATION LICENSES

OPERATOR LICENSES

§ 97.5 Classes of operator licenses.

Amateur extra class.
Advanced class (previously class A).
General class (previously class B).
Conditional class (previously class C).
Technician class.
Novice class.

§ 97.7 Privileges of operator licenses.

(a) *Amateur Extra Class and Advanced Class.* All authorized amateur privileges including exclusive frequency operating authority in accordance with the following table:

Frequencies	*Class of license authorized*
3500-3525 kHz	Amateur Extra Only
3775-3800 kHz	
7000-7025 kHz	
14,000-14,025 kHz	
21,000-21,025 kHz	
21,250-21,270 kHz	
3800-3890 kHz	Amateur Extra and Advanced.
7150-7225 kHz	
14,200-14,275 kHz	
21,270-21,350 kHz	

(b) *General Class.* All authorized amateur privileges except those exclusive operating privileges which are reserved to the Advanced Class and/or Amateur Extra Class.

(c) *Conditional Class.* Same privileges as General Class. New Conditional Class licenses will not be issued. Present Conditional Class licensees will be issued General Class licenses at time of renewal or modification.

(d) *Technician Class.* All authorized amateur privileges on the frequencies 50.0 MHz and above. Technician Class licenses also convey the full privileges of Novice Class licenses.

(e) *Novice Class.* Radiotelegraphy in the frequency bands 3700-3750 kHz, 7100-7150 kHz (7050-7075 kHz when the terrestrial station location is not within Region 2), 21,100-21,200 kHz, and 28,100-28,200 kHz, using only Type A1 emission.

§ 97.9 Eligibility for new operator license.

Anyone except a representative of a foreign government is eligible for an amateur operator license.

§ 97.11 Application for operator license.

(a) An application (FCC Form 610) for a new operator license, including an application for change in operating privileges, which will require an examination supervised by Commission personnel at a regular Commission examining office shall be submitted to such office in advance of or at the time of the examination, except that, whenever an examination is to be taken at a designated examination point away from a Commission office, the application, together with the necessary filing fee should be submitted in advance of the examination date to the office which has jurisdiction over the examination point involved.

(b) An application (FCC Form 610) for a new operator license, including an application for change in operating privileges, which requests an examination supervised by a volunteer examiner under the provisions of § 97.27, shall be submitted to the FCC field office nearest the applicant. Applications for the Novice Class license should be sent to the Commission's offices in Gettysburg, Pa. 17325. All applications should be accompanied by any necessary filing fee.

(c) An application (FCC Form 610) for renewal and/or modification of license when no change in operating privileges is involved shall be submitted, together with any necessary filing fee, to the Commission's office at Gettysburg, Pennsylvania, 17325.

§ 97.13 Renewal or modification of operator license.

(a) An Amateur operator license may be renewed upon proper application.

(b) The applicant shall qualify for a new license by examination if the requirements of this section are not fulfilled.

(c) Application for renewal and/or modification of an amateur operator license shall be submitted on FCC Form 610 and shall be accompanied by the applicant's license. Application for renewal of unexpired licenses must be made during the license term and should be filed within 90 days but not later than 30 days prior to the end of the license term. In any case in which the licensee has, in accordance with the provisions of this chapter, made timely and sufficient application for renewal of an unexpired license, no license with reference to any activity of a continuing nature shall expire until such application shall have been finally determined.

(d) If a license is allowed to expire, application for renewal may be made during a period of grace of one year after the expiration date. During this one year period of grace, an expired license is not valid. A license renewed during the grace period will be dated currently and will not be backdated to the date of its expiration. Application for renewal shall be submitted on FCC Form 610 and shall be accompanied by the applicant's expired license.

(e) When the name of a licensee is changed or when the mailing address is changed a formal application for modification of license is not required. However, the licensee shall notify the Commission promptly of these changes. The notice, which may be in letter form, shall contain the name and address of the licensee as they appear in the Commission's records, the new name and/or address, as the case may be, the radio station call sign and class of operator license. The notice shall be sent to Federal Communications Commission, Gettysburg, Pa. 17325 and a copy shall be kept by the licensee until a new license is issued.

OPERATOR LICENSE EXAMINATIONS

§ 97.19 When examination is required.

Examination is required for the issuance of a new amateur operator license, and for a change in class of operating privileges. Credit may be given, however, for certain elements of examination as provided in § 97.25.

§ 97.21 Examination elements.

Examinations for amateur operator privileges will comprise one or more of the following examination elements:

(a) Element 1(A): Beginner's code test at five (5) words per minute;

(b) Element 1(B): General code test at thirteen (13) words per minute;

(c) Element 1(C): Expert's code test at twenty (20) words per minute;

(d) Element 2: Basic law comprising rules and regulations essential to beginners' operation, including sufficient elementary radio theory for the understanding of those rules;

(e) Element 3: General amateur practice and regulations involving radio operation and apparatus and provisions of treaties, statutes, and rules affecting amateur stations and operators;

(f) Element 4(A): Intermediate amateur practice involving intermediate level radio theory and operation as applicable to modern amateur techniques, including, but not limited to, radiotelephony and radiotelegraphy;

(g) Element 4(B): Advanced amateur practice involving advanced radio theory and operation as applicable to modern amateur techniques, including, but not limited to, radiotelephony, radiotelegraphy, and transmissions of energy for measurements and observations applied to propagation, for the radio control of remote objects and for similar experimental purposes.

§ 97.23 Examination requirements.

Applicants for operator licenses will be required to pass the following examination elements:

(a) Amateur Extra Class: Elements 1(C), 2, 3, 4(A) and 4(B);

(b) Advanced Class: Elements 1(B), 2, 3, and 4(A);

(c) General Class: Elements 1(B), 2 and 3;

(d) Technician Class: Elements 1(A), 2, and 3;

(e) Novice Class: Elements 1(A) and 2.

§ 97.25 Examination credit.

(a) An applicant for a higher class of amateur operator license who holds any valid amateur license will be required to pass only those elements of the higher class examination that are not included in the examination for the amateur license held.

(b) Upon presentation of a properly completed Amateur Code Credit Certificate, FCC Form 845, the FCC shall give the applicant for an amateur radio operator license examination credit for the code speed listed on the Amateur Code Credit Certificate. An Amateur Code Credit Certificate is valid for a period of one year from the date of its issuance and will be honored only at the FCC field office that issued the Amateur Code Credit Certificate.

(c) An applicant for an amateur operator license will be given credit for either telegraph code element 1(A) or 1(B) if within 5 years prior to the receipt of his application by the Commission he held a commercial radiotelegraph operator license or permit issued by the Federal Communications Commission. An applicant for an amateur extra class license will be given credit for the telegraph code element 1(C) if he holds a valid first class commercial radiotelegraph operator license or permit issued by the Federal Communications Commission or holds any commercial radiotelegraph operator license or permit issued by the Federal Communications Commission containing an aircraft radiotelegraph endorsement.

(d) An applicant for the amateur extra class operator license will be given credit for examination element 1(C) if he so requests and submits evidence of having held the

amateur extra first class license, having continuously held its successor license. An applicant should present his proof in advance of the desired examination time to the Chief, Personal Radio Division, Washington, D.C. 20554 and receive a letter of certification for presentation to the field office where the examination will be taken. No code credit will be given without the letter of certification.

(e) No examination credit, except as herein provided, shall be allowed on the basis of holding or having held any amateur or commercial operator license.

§ 97.27 Mail examinations for applicants unable to travel.

The Commission may permit the examinations for an Amateur Extra, Advanced, General, or Technician Class license to be administered at a location other than a Commission examination point by an examiner chosen by the Commission when it is shown by physician's certification that the applicant is unable to appear at a regular Commission examination point because of a protracted disability preventing travel.

§ 97.28 Manner of conducting examinations.

(a) Except as provided in §97.27, all examinations for Amateur Extra, Advanced, General, and Technician Class operator licenses will be conducted by authorized Commission personnel or representatives at locations and times specified by the Commission. Examination elements given under the provisions of §97.27 will be administered by an examiner selected by the Commission. All applications for consideration of eligibility under §97.27 should be filed on FCC Form 610, and should be sent to the FCC field office nearest the applicant. (A list of these offices appears in §0.121 of the Commission's Rules and can be obtained from the Regional Services Division, Field Operations Bureau, FCC, Washington, D.C. 20554, or any field office.)

(b) The examination for a Novice Class operator license shall be conducted and supervised by a volunteer examiner selected by the applicant, unless otherwise prescribed by the Commission. The volunteer examiner shall be at least 18 years of age, shall be unrelated to the applicant, and shall be the holder of an Amateur Extra, Advanced, or General Class operator license. The written portion of the Novice Class operator examination shall be obtained, administered, and submitted in accordance with the following procedure:

(1) Within 10 days after successfully completing telegraphy examination element 1(A), an applicant shall submit an application (FCC Form 610) to the Commission's office in Gettysburg, Pennsylvania 17325. The application shall include a written request from the volunteer examiner for the examination papers for Element 2. The examiner's written request shall include (i) the names and permanent addresses of the examiner and the applicant, (ii) a description of the examiner's qualifications to administer the examination, (iii) the examiner's statement that the applicant has passed telegraphy element 1(A) under his supervision within the 10 days prior to submission of the request, and (iv) the examiner's written signature. Examination papers will be forwarded only to the volunteer examiner.

(2) The volunteer examiner shall be responsible for the proper conduct and necessary supervision of the examination. Administration of the examination shall be in accordance with the instructions included with the examination papers.

(3) The examination papers, either completed or unopened in the event the examination is not taken, shall be returned by the volunteer examiner to the Commission's office in Gettysburg, Pa., no later than 30 days after the date the papers are mailed by the Commission (the date of mailing is normally stamped by the Commission on the outside of the examination envelope).

(c) The code test required of an applicant for an amateur radio operator license, in accordance with the provisions of §§97.21 and 97.23 shall determine the applicant's ability to transmit by hand key (straight key or, if supplied by the applicant, any other type of hand operated key such as a semi-automatic or electronic key, but not a keyboard keyer) and to receive by ear, in plain language, messages in the international Morse code at not less than the prescribed speed during a five minute test period. Each five characters shall be counted as one word. Each punctuation mark and numeral shall be counted as two characters.

(d) All written portions of the examinations for amateur operator privileges shall be completed by the applicant in legible handwriting or hand printing. Whenever the applicant's signature is required, his normal signature shall be used. Applicants unable to comply with these requirements, because of physical disability, may dictate their answers to the examination questions and the receiving code test. If the examination or any part thereof is dictated, the examiner shall certify the nature of the applicant's disability and the name and address of the person(s) taking and transcribing the applicant's dictation.

§ 97.31 Grading of examinations.

(a) Code tests for sending and receiving are graded separately.

(b) Seventy-four percent (74%) is the passing grade for written examinations. For the purpose of grading, each element required in qualifying for a particular license will be considered as a separate examination. All written examinations will be graded only by Commission personnel.

§ 97.32 Interim Amateur Permits.

(a) Upon successful completion of a Commission supervised Amateur Radio Service operator examination, an applicant already licensed in the Amateur Radio Service may operate his amateur radio station pending issuance of his permanent amateur operator and station licenses under the terms and conditions of an Interim Amateur Permit, evidenced by a properly executed FCC Form 660-B.

(b) An Interim Amateur Permit conveys all operating privileges of the applicant's new operator license classification.

(c) The transmissions of amateur radio stations operated under the authority of Interim Amateur Permits shall be identified in the manner specified in §97.84.

(d) The original Interim Amateur Permit of an amateur radio operator shall be kept in the personal possession of or

posted in a conspicuous place in the room occupied by such operator when operating an amateur radio station under the authority of an Interim Amateur Permit.

(e) Interim Amateur Permits are valid for a period of 90 days from the date of issuance or until issuance of the permanent station and operator licenses, whichever comes first, but may be set aside by the Commission within the 90 day term if it appears that the permanent operator and station licenses cannot be granted routinely.

(f) Interim Amateur Permits shall not be renewed.

§ 97.33 Eligibility for re-examination.

An applicant who fails an examination element required for an amateur radio operator license shall not apply to be examined for the same or higher examination element within thirty days of the date the examination element was failed.

STATION LICENSES

§ 97.37 General eligibility for station license.

An amateur radio station license will be issued only to a licensed amateur radio operator, except that a military recreation station license may also be issued to an individual not licensed as an amateur radio operator (other than a representative of a foreign government), who is in charge of a proposed military recreation station not operated by the U.S. Government but which is to be located in approved public quarters.

§ 97.39 Eligibility of corporations or organizations to hold station license.

An amateur station license will not be issued to a school, company, corporation, association, or other organization, except that in the case of a *bona fide* amateur radio organization or society meeting the criteria set forth in Section 97.3, a station license may be issued to a licensed amateur operator, other than the holder of a Novice Class license, as trustee for such society.

§ 97.40 Station license required.

(a) No transmitting station shall be operated in the amateur radio service without being licensed by the Federal Communications Commission.

(b) Every amateur radio operator shall have one, but only one, primary amateur radio station license.

§ 97.41 Application for station license.

(a) Each application for a club or military recreation station license in the Amateur Radio Service shall be made on the FCC Form 610-B. Each application for any other amateur radio license shall be made on the FCC Form 610.

(b) One application and all papers incorporated therein and made a part thereof shall be submitted for each amateur station license. If the application is only for a station license, it shall be filed directly with the Commission's Gettysburg, Pennsylvania office. If the application also contains an application for any class of amateur operator license, it shall be filed in accordance with the provisions of §97.11.

(c) Each applicant in the Safety and Special Radio Services (1) for modification of a station license involving a site change or a substantial increase in tower height or (2) for a license for a new station must, before commencing construction, supply the environmental information, where required, and must follow the procedure prescribed by Subpart I of Part 1 of this chapter (§§ 1.1301 through 1.1319) unless Commission action authorizing such construction would be a minor action with the meaning of Subpart I of Part I.

§ 97.42 Mailing address furnished by licensee.

Except for applications submitted by Canadian citizens pursuant to agreement between the United States and Canada (TIAS No. 2508 and No. 6931), each application shall set forth and each licensee shall furnish the Commission with an address in the United States to be used by the Commission in serving documents or directing correspondence to that licensee. Unless any licensee advises the Commission to the contrary, the address contained in the licensee's most recent application will be used by the Commission for this purpose.

§ 97.43 Location of station.

Every amateur radio station shall have one land location, the address of which appears on the station license, and at least one control point.

§ 97.45 Limitations on antenna structures.

(a) Except as provided in paragraph (b) of this section, an antenna for a station in the Amateur Radio Service which exceeds the following height limitations may not be erected or used unless notice has been filed with both the FAA on FAA Form 7460-1 and with the Commission on Form 714 or on the license application form, and prior approval by the Commission has been obtained for:

(1) Any construction or alteration of more than 200 feet in height above ground level at its site (§17.7(a) of this chapter).

(2) Any construction or alteration of greater height than an imaginary surface extending outward and upward at one of the following slopes (§17.7(b) of this chapter):

(i) 100 to 1 for a horizontal distance of 20,000 feet from the nearest point of the nearest runway of each airport with at least one runway more than 3,200 feet in length, excluding heliports and seaplane bases without specified boundaries, if that airport is either listed in the Airport Directory of the current Airman's Information Manual or is operated by a Federal military agency.

(ii) 50 to 1 for a horizontal distance of 10,000 feet from the nearest point of the nearest runway of each airport with its longest runway no more than 3,200 feet in length, excluding heliports and seaplane bases without specified boundaries, if that airport is either listed in the Airport Directory or is operated by a Federal military agency.

(iii) 25 to 1 for a horizontal distance of 5,000 feet from the nearest point of the nearest landing and takeoff area of each heliport listed in the Airport Directory or operated by a Federal military agency.

(3) Any construction or alteration on an airport listed in the Airport Directory of the Airman's Information Manual (§17.7(c) of this chapter).

(b) A notification to the Federal Aviation Administration is not required for any of the following construction or alteration:

(1) Any object that would be shielded by existing structures of a permanent and substantial character or by natural terrain or topographic features of equal or greater height, and would be located in the congested area of a city, town, or settlement where it is evident beyond all reasonable doubt that the structure so shielded will not adversely affect safety in air navigation. Applicants claiming such exemption shall submit a statement with their application to the Commission explaining the basis in detail for their finding (§17.14(a) of this chapter).

(2) Any antenna structure of 20 feet or less in height except one that would increase the height of another antenna structure (§17.14(b) of this chapter).

(c) Further details as to whether an aeronautical study and/or obstruction marking and lighting may be required, and specifications for obstruction marking and lighting when required, may be obtained from Part 17 of this chapter, "Construction, Marking, and Lighting of Antenna Structures." Information regarding the inspection and maintenance of antenna structures requiring obstruction marking and lighting is also contained in Part 17 of this chapter.

§ 97.47 Renewal and/or modification of amateur station license.

(a) Application for renewal and/or modification of an individual station license shall be submitted on FCC Form 610, and application for renewal and/or modification of an amateur club or military recreation station shall be submitted on FCC Form 610-B. In every case the application shall be accompanied by the applicant's license or photocopy thereof. Applications for renewal of unexpired licenses must be made during the license term and should be filed not later than 60 days prior to the end of the license term. In any case in which the licensee has in accordance with the provisions of this chapter, made timely and sufficient application for renewal of an unexpired license, no license with reference to any activity of a continuing nature shall expire until such application shall have been finally determined.

(b) If a license is allowed to expire, application for renewal may be made during a period of grace of 1 year after the expiration date. During this 1-year period of grace, an expired license is not valid. A license renewed during the grace period will be dated currently and will not be backdated to the date of expiration. An application for an individual station license shall be submitted on FCC Form 610. An application for an amateur club or military recreation station license shall be submitted on FCC Form 610-B. In every case the application shall be accompanied by the applicant's expired license or a photocopy thereof.

(c) When the name of a licensee is changed (without changes in the ownership, control, or corporate structure), or when the mailing address is changed (without changing the authorized location of the amateur radio station) a formal application for modification of license is not required. However, the licensee shall notify the Commission promptly of these changes. The notice, which may be in letter form, shall contain the name and address of the licensee as they appear in the Commission's records, the new name and/or address, as the case may be, and the call sign and the class of operator license. The notice shall be sent to Federal Communications Commission, Gettysburg, Pa., 17325, and a copy shall be maintained with the license of each station until a new license is issued.

§ 97.49 Commission modification of station license.

(a) Whenever the Commission shall determine that public interest, convenience, and necessity would be served, or any treaty ratified by the United States will be more fully complied with, by the modification of any radio station license either for a limited time, or for the duration of the term thereof, it shall issue an order for such licensee to show cause why such license should not be modified.

(b) Such order to show cause shall contain a statement of the grounds and reasons for such proposed modification, and shall specify wherein the said license is required to be modified. It shall require the licensee against whom it is directed to appear at a place and time therein named, in no event to be less than 30 days from the date of receipt of the order, to show cause why the proposed modification should not be made and the order of modification issued.

(c) If the licensee against whom the order to show cause is directed does not appear at the time and place provided in said order, a final order of modification shall issue forthwith.

CALL SIGNS

§ 97.51 Assignment of call signs.

(a) The Commission shall assign the call sign of an amateur radio station on a systematic basis.

(b) The Commission shall not grant any request for a specific call sign.

(c) From time to time the Commission will issue public announcements detailing the policies and procedures governing the systematic assignment of call signs and any changes in those policies and procedures.

DUPLICATE LICENSES AND LICENSE TERM

§ 97.57 Duplicate license.

Any licensee requesting a duplicate license to replace an original which has been lost, mutilated, or destroyed, shall submit a statement setting forth the facts regarding the manner in which the original license was lost, mutilated, or destroyed. If, subsequent to receipt by the licensee of the duplicate license, the original license is found, either the duplicate or the original license shall be returned immediately to the Commission.

§ 97.59 License term.

(a) Amateur operator licenses are normally valid for a period of five years from the date of issuance of a new or renewed license.

(b) Amateur station licenses are normally valid for a period of five years from the date of issuance of a new or renewed license. All amateur station licenses, regardless of when issued, will expire on the same date as the licensee's amateur operator license.

(c) A duplicate license or a modified license which is not being renewed shall bear the same expiration date as the license for which it is a modification or duplicate.

SUBPART C—TECHNICAL STANDARDS

§ 97.61 Authorized frequencies and emissions.

(a) The following frequency bands and associated emissions are available to amateur radio stations for amateur radio operation, other than repeater operation and auxiliary operation, subject to the limitations of §97.65 and paragraph (b) of this section:

Frequency band	Emissions	Limitations (See paragraph (b))
kHz		
1800-2000	A1, A3	1,2
3500-4000	A1	
3500-3775	F1	
3775-3890	A5, F5	
3775-4000	A3, F3	4
4383.8	A3J/A3A	13
7000-7300	A1	3,4
7000-7150	F1	3,4
7075-7100	A3, F3	11
7150-7225	A5, F5	3,4
7150-7300	A3, F3	3,4
14000-14350	A1	
14000-14200	F1	
14200-14275	A5, F5	
14200-14350	A3, F3	
MHz		
21.000-21.450	A1	
21.000-21.250	F1	
21.250-21.350	A5, F5	
21.250-21.450	A3, F3	
28.000-29.700	A1	
28.000-28.500	F1	
28.500-29.700	A3, F3, A5, F5	
50.0-54.0	A1	
50.1-54.0	A2, A3, A4, A5, F1, F2, F3, F5	
51.0-54.0	A0	
144-148	A1	
144.1-148.0	A0, A2, A3, A4, A5, F0, F1, F2, F3, F5	
220-225	A0, A1, A2, A3, A4, A5, F0, F1, F2, F3, F4, F5	
420-450	A0, A1, A2, A3, A4, A5, F0, F1, F2, F3, F4, F5	5,7
1215-1300	A0, A1, A2, A3, A4, A5, F0, F1, F2, F3, F4, F5	5
2300-2450	A0, A1, A2, A3, A4, A5, F0, F1, F2, F3, F4, F5, P	5,8
3300-3500	A0, A1, A2, A3, A4, A5, F0, F1, F2, F3, F4, F5, P	5,12
5650-5925	A0, A1, A2, A3, A4, A5, F0, F1, F2, F3, F4, F5, P	5,9
GHz		
10.000-10.500	A0, A1, A2, A3, A4, A5, F0, F1, F2, F3, F4, F5	5
24.000-24.250	A0, A1, A2, A3, A4, A5, F0, F1, F2, F3, F4, F5, P	5,10
48.000-50.000	A0, A1, A2, A3, A4, A5, F0, F1, F2, F3, F4, F5, P	
71.000-76.000	A0, A1, A2, A3, A4, A5, F0, F1, F2, F3, F4, F5, P	
165.000-170.000	A0, A1, A2, A3, A4, A5, F0, F1, F2, F3, F4, F5, P	
240.000-250.000	A0, A1, A2, A3, A4, A5, F0, F1, F2, F3, F4, F5, P	
Above 300.000	A0, A1, A2, A3, A4, A5, F0, F1, F2, F3, F4, F5, P	

(b) Limitations:

(1) The use of frequencies in this band is on a shared basis with the LORAN-A radionavigation system and is subject to cancellation or revision, in whole or in part, by order of the Commission, without hearing, whenever the Commission shall determine such action is necessary in view of the priority of the LORAN-A radionavigation system. The use of these frequencies by amateur stations shall not cause harmful interference to LORAN-A system. If an amateur station causes such interference, operation on the frequencies involved must cease if so directed by the Commission.

(2) Operation shall be limited to:

Area	Maximum DC plate input power in watts							
	1800-1825 kHz	1825-1850 kHz	1850-1875 kHz	1875-1900 kHz	1900-1925 kHz	1925-1950 kHz	1950-1975 kHz	1975-2000 kHz
	Day/Night	Day/Night	Day/Night	Day/Night	Day/Night	Day/Night	Day/Night	Day/Night
Alabama	500/100	100/25	0	0	0	0	100/25	500/100
Alaska	1000/200	500/100	500/100	100/25	0	0	0	0
Arizona	1000/200	500/100	500/100	0	0	0	0	0
Arkansas	1000/200	500/100	100/25	0	0	100/25	100/25	500/100
California	1000/200	500/100	500/100	100/25	0	0	0	0
Colorado	1000/200	500/100	200/50	0	0	0	0	200/50
Connecticut	500/100	100/25	0	0	0	0	0	0
Delaware	500/100	100/25	0	0	0	0	0	100/25
District of Columbia	500/100	100/25	0	0	0	0	0	100/25
Florida	500/100	100/25	0	0	0	0	100/25	500/100
Georgia	500/100	100/25	0	0	0	0	0	200/50
Hawaii	0	0	0	0	200/50	100/25	100/25	500/100
Idaho	1000/200	500/100	500/100	100/25	100/25	100/25	100/25	500/100
Illinois	1000/200	500/100	100/25	0	0	0	0	200/50
Indiana	1000/200	500/100	100/25	0	0	0	0	200/50
Iowa	1000/200	500/100	200/50	0	0	100/25	100/25	500/100
Kansas	1000/200	500/100	100/25	0	0	100/25	100/25	500/100
Kentucky	1000/200	500/100	100/25	0	0	0	0	200/50
Louisiana	500/100	100/25	0	0	0	0	100/25	500/100
Maine	500/100	100/25	0	0	0	0	0	0
Maryland	500/100	100/25	0	0	0	0	0	100/25
Massachusetts	500/100	100/25	0	0	0	0	0	0
Michigan	1000/200	500/100	100/25	0	0	0	0	100/25
Minnesota	1000/200	500/100	500/100	100/25	100/25	100/25	100/25	500/100
Mississippi	500/100	100/25	0	0	0	0	100/25	500/100
Missouri	1000/200	500/100	100/25	0	0	100/25	100/25	500/100
Montana	1000/200	500/100	500/100	100/25	100/25	100/25	100/25	500/100
Nebraska	1000/200	500/100	200/50	0	0	100/25	100/25	500/100
Nevada	1000/200	500/100	500/100	100/25	0	0	0	0
New Hampshire	500/100	100/25	0	0	0	0	0	0
New Jersey	500/100	100/25	0	0	0	0	0	0
New Mexico	1000/200	500/100	100/25	0	0	100/25	500/100	1000/200
New York	500/100	100/25	0	0	0	0	0	0
North Carolina	500/100	100/25	0	0	0	0	0	100/25
North Dakota	1000/200	500/100	500/100	100/25	100/25	100/25	100/25	500/100
Ohio	1000/200	500/100	100/25	0	0	0	0	100/25
Oklahoma	1000/200	500/100	100/25	0	0	100/25	100/25	500/100
Oregon	1000/200	500/100	500/100	100/25	0	0	0	0
Pennsylvania	500/100	100/25	0	0	0	0	0	0
Rhode Island	500/100	100/25	0	0	0	0	0	0
South Carolina	500/100	100/25	0	0	0	0	0	200/50
South Dakota	1000/200	500/100	500/100	100/25	100/25	100/25	100/25	500/100
Tennessee	1000/200	500/100	100/25	0	0	0	0	200/50
Texas	500/100	100/25	0	0	0	0	0	200/50
Utah	1000/200	500/100	500/100	100/25	100/25	0	0	100/25
Vermont	500/100	100/25	0	0	0	0	0	0
Virginia	500/100	100/25	0	0	0	0	0	100/25
Washington	1000/200	500/100	500/100	100/25	0	0	0	0
West Virginia	1000/200	500/100	100/25	0	0	0	0	100/25
Wisconsin	1000/200	500/100	200/50	0	0	0	0	200/50
Wyoming	1000/200	500/100	500/100	100/25	100/25	0	0	200/50
Puerto Rico	500/100	100/25	0	0	0	0	0	200/50
Virgin Islands	500/100	100/25	0	0	0	0	0	200/50
Swan Island	500/100	100/25	0	0	0	0	100/25	500/100
Serrana Bank	500/100	100/25	0	0	0	0	100/25	500/100
Roncador Key	500/100	100/25	0	0	0	0	100/25	500/100
Navassa Island	500/100	100/25	0	0	0	0	0	200/50
Baker, Canton, Enderbury, Howland	100/25	0	0	100/25	100/25	0	0	100/25
Guam, Johnston, Midway	0	0	0	0	100/25	0	0	100/25
American Samoa	200/50	0	0	200/50	200/50	0	0	200/50
Wake	100/25	0	0	100/25	0	0	0	0
Palmyra, Jarvis	0	0	0	0	200/50	0	0	200/50

(3) Where, in adjacent regions or subregions, a band of frequencies is allocated to different services of the same category, the basic principle is the equality of right to operate. Accordingly, the stations of each service in one region or subregion must operate so as not to cause harmful interference to services in the other regions or subregions (No. 117, the Radio Regulations, Geneva, 1959).

(4) 3900-4000 kHz and 7100-7300 kHz are not available in the following U.S. possessions: Baker, Canton, Enderbury, Guam, Howland, Jarvis, Palmyra, American Samoa, and Wake Islands.

(5) Amateur stations shall not cause interference to the Government radiolocation service.

(6) (Reserved)

(7) In the following areas the d.c. plate input power to the final transmitter stage shall not exceed 50 watts, except when authorized by the appropriate Commission Engineer in Charge and the appropriate Military Area Frequency Coordinator.

(i) Those portions of Texas and New Mexico bounded by latitude 33°24′ N., 31°53′ N., and longitude 105°40′ W. and 106°40′ W.

(ii) The State of Florida, including the Key West area and the areas enclosed within circles of 200-mile radius centered at 28°21′ N., 80°43′W. and 30°30′ N., 86°30′ W.

(iii) The State of Arizona.

(iv) Those portions of California and Nevada south of latitude 37°10′ N. and the area within a 200-mile radius of 34°09′ N., 119°11′ W.

(8) No protection in the band 2400-2500 MHz is afforded from interference due to the operation of industrial, scientific, and medical devices on 2450 MHz.

(9) No protection in the band 5725-5875 MHz is afforded from interference due to the operation of industrial, scientific and medical devices on 5800 MHz.

(10) No protection in the band 24.00-24.25 GHz is afforded from interference due to the operation of industrial, scientific and medical devices on 24.125 GHz.

(11) The use of A3 and F3 in this band is limited to amateur radio stations located outside Region 2.

(12) Amateur stations shall not cause interference to the Fixed-Satellite Service operating in the band 3400-3500 MHz.

(13) The frequency 4383.8 kHz, maximum power 150 watts, may be used by any station authorized under this part to communicate with any other station authorized in the State of Alaska for emergency communications. No airborne operations will be permitted on this frequency. Additionally, all stations operating on this frequency must be located in or within 50 nautical miles of the State of Alaska.

(c) All amateur frequency bands above 29.5 MHz are available for repeater operation, except 50.0-52.0 MHz, 144.0-144.5 MHz, 145.5-146.0 MHz, 220.0-220.5 MHz, 431.0-433.0 MHz, and 435.0-438.0 MHz. Both the input (receiving) and output (transmitting) frequencies of a station in repeater operation shall be frequencies available for repeater operation.

(d) All amateur frequency bands above 220.5 MHz, except 431-433 MHz, and 435-438 MHz, are available for auxiliary operation.

§ 97.63 Selection and use of frequencies.

(a) An amateur station may transmit on any frequency within any authorized amateur frequency band.

(b) Sideband frequencies resulting from keying or modulating a carrier wave shall be confined within the authorized amateur band.

(c) The frequencies available for use by a control operator of an amateur station are dependent on the operator license classification of the control operator and are listed in §97.7.

§ 97.65 Emission limitations.

(a) Type AØ emission, where not specifically designated in the bands listed in §97.61, may be used for short periods of time when required for authorized remote control purposes or for experimental purposes. However, these limitations do not apply where type AØ emission is specifically designated.

(b) Whenever code practice, in accordance with §97.91(d), is conducted in bands authorized for A3 emission, tone modulation of the radiotelephone transmitter may be utilized when interspersed with appropriate voice instructions.

(c) On frequencies below 29.0 MHz and between 50.1 and 52.5 MHz, the bandwidth of an F3 emission (frequency or phase modulation) shall not exceed that of an A3 emission having the same audio characteristics; and the purity and stability of emissions shall comply with the requirements of §97.73.

(d) On frequencies below 50 MHz, the bandwidth of A5 and F5 emissions shall not exceed that of an A3 single sideband emission.

(e) On frequencies between 50 MHz and 225 MHz, single sideband or double sideband A5 emission may be used and the bandwidth shall not exceed that of an A3 single sideband or double sideband signal respectively. The bandwidth of F5 emission shall not exceed that of an A3 single sideband emission.

(f) Below 225 MHz, A3 and A5 emissions may be used simultaneously on the same carrier frequency provided the total bandwidth does not exceed that of an A3 double sideband emission.

§ 97.67 Maximum authorized power.

(a) Except for power restrictions as set forth in §97.61 and paragraph (d) below each amateur transmitter may be operated with a power input not exceeding one kilowatt to the plate circuit of the final amplifier stage of an amplifier oscillator transmitter or to the plate circuit of an oscillator transmitter. An amateur transmitter operating with a power input exceeding 900 watts to the plate circuit shall provide means for accurately measuring the plate power input to the vacuum tube or tubes supplying power to the antenna.

(b) Notwithstanding the provisions of paragraph (a) of this section, amateur stations shall use the minimum amount of transmitter power necessary to carry out the desired communications.

(c) Within the limitations of paragraphs (a) and (b) of this section, the effective radiated power of an amateur radio station in repeater operation shall not exceed the power specified for the antenna height above average terrain in the following table:

Antenna height above average terrain	Maximum effective radiated power for frequency bands above:			
	52 MHz	144.5 MHz	420 MHz	1215 MHz
Below 50 feet	100 watts	800 watts	Paragraphs (a) and (b)	Paragraphs (a) and (b)
50-99 feet	100 watts	400 watts	..do..	..do..
100-499 feet	50 watts	400 watts	800 watts	..do..
500-999 feet	25 watts	200 watts	800 watts	..do..
Above 1000 feet	25 watts	100 watts	400 watts	..do..

(d) In the frequency bands 3700-3750 kHz, 7100-7150 kHz (7050-7075 kHz when the terrestrial location of the station is not within Region 2), 21,100-21,200 kHz and 28,100-28,200 kHz, the power input to the transmitter final amplifying stage supplying radio frequency energy to the antenna shall not exceed 250 watts, exclusive of power for heating the cathode of a vacuum tube(s).

§ 97.69 Radio teleprinter transmissions.

The following special conditions shall be observed during the transmission of radio teleprinter signals on authorized frequencies by amateur stations:

(a) A single channel five-unit (start-stop) teleprinter code shall be used which shall correspond to the International Telegraphic Alphabet No. 2 with respect to all letters and numerals (including the slant sign or fraction bar) but special signals may be employed for the remote control of receiving printers, or for other purposes, in "figures" positions not utilized for numerals. In general, this code shall conform as nearly as possible to the teleprinter code or codes in common commercial usage in the United States.

(b) The normal transmitting speed of the radio teleprinter signal keying equipment shall be adjusted as closely as possible to one of the standard teleprinter speeds, namely, 60 (45 bauds), 67 (50 bauds), 75 (56.25 bauds) or 100 (75 bauds) words per minute, and in any event, within the range of ±5 words per minute of the selected standard speed.

(c) When frequency shift keying (type F1 emission) is utilized, the deviation in frequency from the mark signal to space signal, or from the space signal to the mark signal, shall be less than 900 Hertz.

(d) When audio frequency shift keying (type A2 or type F2 emission) is utilized, the highest fundamental modulating audio frequency shall not exceed 3000 hertz, and the difference between the modulating audio frequency for the mark signal and that for the space signal shall be less than 900 hertz.

§ 97.71 Transmitter power supply.

The licensee of an amateur station using frequencies below 144 megahertz shall use adequately filtered direct-current plate power supply for the transmitting equipment to minimize modulation from this source.

§ 97.73 Purity of emissions.

(a) Except for a transmitter or transceiver built before April 15, 1977 or first marketed before January 1, 1978, the mean power of any spurious emission or radiation from an amateur transmitter, transceiver, or external radio frequency power amplifier being operated with a carrier frequency below 30 MHz shall be at least 40 decibels below the mean power of the fundamental without exceeding the power of 50 milliwatts. For equipment of mean power less than five watts, the attenuation shall be at least 30 decibels.

(b) Except for a transmitter or transceiver built before April 15, 1977 or first marketed before January 1, 1978, the mean power of any spurious emission or radiation from an amateur transmitter, transceiver, or external radio frequency power amplifier being operated with a carrier frequency above 30 MHz but below 235 MHz shall be at least 60 decibels below the mean power of the fundamental. For a transmitter having a mean power of 25 watts or less, the mean power of any spurious radiation supplied to the antenna transmission line shall be at least 40 decibels below the mean power of the fundamental without exceeding the power of 25 microwatts, but need not be reduced below the power of 10 microwatts.

(c) Paragraphs (a) and (b) of this section notwithstanding, all spurious emissions or radiation from an amateur transmitter, transceiver, or external radio frequency power amplifier shall be reduced or eliminated in accordance with good engineering practice.

(d) If any spurious radiation, including chassis or power line radiation, causes harmful interference to the reception of another radio station, the licensee may be required to take steps to eliminate the interference in accordance with good engineering practice.

NOTE: For the purposes of this section, a spurious emission or radiation means any emission or radiation from a transmitter, transceiver, or external radio frequency power amplifier which is outside of the authorized Amateur Radio Service frequency band being used.

§ 97.74 Frequency measurement and regular check.

The licensee of an amateur station shall provide for measurement of the emitted carrier frequency or frequencies and shall establish procedures for making such measurement regularly. The measurement of the emitted carrier frequency or frequencies shall be made by means independent of the means used to control the radio frequency or frequencies generated by the transmitting apparatus and shall be of sufficient accuracy to assure operation within the amateur frequency band used.

§ 97.75 Use of external radio frequency (RF) power amplifiers.

(a) Until April 28, 1981, any external radio frequency (RF) power amplifier used or attached at any amateur radio station shall be type accepted in accordance with Subpart J of Part 2 of the FCC's Rules for operation in the Amateur Radio Service, unless one or more of the following conditions are met:

(1) The amplifier is not capable of operation on any frequency or frequencies below 144 MHz (the amplifier shall be considered incapable of operation below 144 MHz if the mean output power decreases, as frequency decreases from 144 MHz, to a point where 0 decibels or less gain is exhibited at 120 MHz and below and the amplifier is not capable of being easily modified to provide amplification below 120 MHz);

(2) The amplifier was originally purchased before April 28, 1978;

(3) The amplifier was—

(i) Constructed by the licensee, not from an external RF power amplifier kit, for use at his amateur radio station;

(ii) Purchased by the licensee as an external RF power amplifier kit before April 28, 1978 for use at his amateur radio station; or

(iii) Modified by the licensee for use at his amateur radio station in accordance with §2.1001 of the FCC's Rules;

(4) The amplifier was purchased by the licensee from another amateur radio operator who—

(i) Constructed the amplifier, but not from an external RF power amplifier kit;

(ii) Purchased the amplifier as an external RF power amplifier kit before April 28, 1978 for use at his amateur radio station; or

(iii) Modified the amplifier for use at his amateur radio station in accordance with §2.1001 of the FCC's Rules;

(5) The external RF power amplifier was purchased from a dealer who obtained it from an amateur radio operator who—

(i) Constructed the amplifier, but not from an external RF power amplifier kit;

(ii) Purchased the amplifier as an external RF power amplifier kit before April 28, 1978 for use at his amateur radio station; or

(iii) Modified the amplifier for use at his amateur radio station in accordance with §2.1001 of the FCC's Rules; or

(6) The amplifier was originally purchased after April 27, 1978 and has been issued a marketing waiver by the FCC.

(b) A list of type accepted equipment may be inspected at FCC headquarters in Washington, D.C. or at any FCC field office. Any external RF power amplifier appearing on this list as type accepted for use in the Amateur Radio Service may be used in the Amateur Radio Service.

NOTE: No more than one unit of one model of an external RF power amplifier shall be constructed or modified during any calendar year by an amateur radio operator for use in the Amateur Radio Service without a grant of type acceptance.

§ 97.76 Requirements for type acceptance of external radio frequency (RF) power amplifiers and external radio frequency power amplifier kits.

(a) Until April 28, 1981, any external radio frequency (RF) power amplifier or external RF power amplifier kit marketed (as defined in §2.815), manufactured, imported or modified for use in the Amateur Radio Service shall be type accepted for use in the Amateur Radio Service in accordance with Subpart J or Part 2 of the FCC's Rules. This requirement does not apply if one or more of the following conditions are met:

(1) The amplifier is not capable of operation on any frequency or frequencies below 144 MHz (the amplifier shall be considered incapable of operation below 144 MHz if the mean output power decreases, as frequency decreases from 144 MHz, to a point where 0 decibels or less gain is exhibited at 120 MHz and below and the amplifier is not capable of being easily modified to provide amplification below 120 MHz).

(2) The amplifier was originally purchased before April 28, 1978 by an amateur radio operator for use at his amateur radio station;

(3) The amplifier was constructed or modified by an amateur radio operator for use at his amateur radio station in accordance with §2.1001 of the FCC's Rules;

(4) The amplifier was constructed or modified by an amateur radio operator in accordance with §2.1001 of the FCC's Rules and sold to another amateur radio operator or to a dealer;

(5) The amplifier was constructed or modified by an amateur radio operator in accordance with §2.1001 of the FCC's Rules and sold by a dealer to an amateur radio operator for use at his amateur radio station; or

(6) The amplifier was manufactured before April 28, 1978 and has been issued a marketing waiver by the FCC.

(b) No more than one unit of one model of an external RF power amplifier shall be constructed or modified during any calendar year by an amateur radio operator for use in the Amateur Radio Service without a grant of type acceptance.

(c) A list of type accepted equipment may be inspected at FCC headquarters in Washington, D.C. or at any FCC field office. Any external RF power amplifier appearing on this list as type accepted for use in the Amateur Radio Service may be marketed for use in the Amateur Radio Service.

§ 97.77 Standards for type acceptance of external radio frequency (RF) power amplifiers and external radio frequency power amplifier kits.

(a) An external radio frequency (RF) power amplifier or external RF power amplifier kit will receive a grant of type acceptance under this Part only if a grant of type acceptance would serve the public interest, convenience or necessity.

(b) To receive a grant of type acceptance under this Part, an external RF power amplifier shall meet the emission limitations of §97.73 when the amplifier is—

(1) Operated at its full output power;

(2) Placed in the "standby" or "off" positions, but still connected to the transmitter; and

(3) Driven with at least 50 watts mean radio frequency input power (unless a higher drive level is specified).

(c) To receive a grant of type acceptance under this part, an external RF power amplifier shall not be capable of operation on any frequency or frequencies between 24.00 MHz and 35.00 MHz. The amplifier will be deemed incapable of operation between 24.00 MHz and 35.00 MHz if—

(1) The amplifier has no more than 6 decibels of gain between 24.00 MHz and 26.00 MHz and between 28.00 MHz and 35.00 MHz. (This gain is determined by the ratio of the input RF driving signal (mean power measurement) to the mean RF output power of the amplifier.); and

(2) The amplifier exhibits no amplification (0 decibels of gain) between 26.00 MHz and 28.00 MHz.

(d) Type acceptance of external radio frequency power amplifiers or amplifier kits may be denied when denial serves the public interest, convenience or necessity by preventing the use of these amplifiers in services other than the Amateur Radio Service. Other uses of these amplifiers, such as in the Citizens Band Radio Service, is prohibited (Section 95.509). Examples of features which may result in dismissal or denial of an application for type acceptance of an external RF power amplifier include, but are not limited to, the following:

(1) Any accessible wiring which, when altered, would permit operation of the amplifier in a manner contrary to the FCC's Rules;

(2) Circuit boards or similar circuitry to facilitate the addition of components to change the amplifier's operating characteristics in a manner contrary to the FCC's Rules;

(3) Instructions for operation or modification of the amplifier in a manner contrary to the FCC's Rules;

(4) Any internal or external controls or adjustments to facilitate operation of the amplifier in a manner contrary to the FCC's Rules.

(5) Any internal radio frequency sensing circuitry or any external switch, the purpose of which is to place the amplifier in the transmit mode;

(6) The incorporation of more gain in the amplifier than is necessary to operate in the Amateur Radio Service. For purposes of this paragraph, an amplifier must meet the following requirements:

(i) No amplifier shall be capable of achieving designed output (or designed d.c. input) power when driven with less than 50 watts mean radio frequency input power;

(ii) No amplifier shall be capable of amplifying the input RF driving signal by more than 13 decibels. (This gain limitation is determined by the ratio of the input RF driving signal (mean power) to the mean RF output power of the amplifier). If the amplifier has a designed d.c. input power of less than 1000 watts, the gain allowance is reduced accordingly. (For example, an amplifier with a designed d.c. input power of 500 watts shall not be capable of amplifying the input RF driving signal (mean power measurement) by more than 10 decibels, compared to the mean RF output power of the amplifier.);

(iii) The amplifier shall not exhibit more gain than permitted by paragraph (d)(6)(ii) of this section when driven by a radio frequency input signal of less than 50 watts mean power; and

(iv) The amplifier shall be capable of sustained operation at its designed power level.

(7) Any attenuation in the input of the amplifier which, when removed or modified, would permit the amplifier to function at its designed output power when driven by a radio frequency input signal of less than 50 watts mean power.

SUBPART D—OPERATING REQUIREMENTS AND PROCEDURES

GENERAL

§ 97.78 Practice to be observed by all licensees.

In all respects not specifically covered by these regulations each amateur station shall be operated in accordance with good engineering and good amateur practice.

§ 97.79 Control operator requirements.

(a) The licensee of an amateur station shall be responsible for its proper operation.

(b) Every amateur radio station, when in operation, shall have a control operator at an authorized control point. The control operator shall be on duty, except where the station is operated under automatic control. The control operator may be the station licensee, if a licensed amateur radio operator, or may be another amateur radio operator with the required class of license and designated by the station licensee. The control operator shall also be responsible, together with the station licensee, for the proper operation of the station.

(c) An amateur station may only be operated in the manner and to the extent permitted by the operator privileges authorized for the class of license held by the control operator, but may exceed those of the station licensee provided proper station identification procedures are performed.

(d) The licensee of an amateur radio station may permit any third party to participate in amateur radio communication from his station, provided that a control operator is present and continuously monitors and supervises the radio communication to insure compliance with the rules.

§ 97.81 Authorized apparatus.

An amateur station license authorizes the use under control of the licensee of all transmitting apparatus at the fixed location specified in the station license which is operated on any frequency, or frequencies allocated to the amateur service, and in addition authorizes the use, under control of the licensee, of portable and mobile transmitting apparatus operated at other locations.

§ 97.82 Availability of operator license.

The original operator license of each operator shall be kept in the personal possession of the operator while operating an amateur station. When operating an amateur station at a fixed location, however, the license may be posted in a conspicuous place in the room occupied by the operator. The license shall be available for inspection by any authorized Government official whenever the operator is operating an amateur station and at other times upon request made by an authorized representative of the Commission, except when such license has been filed with application for modification or renewal thereof, or has been mutilated, lost or destroyed, and request has been made for a duplicate license in accordance with §97.57. No recognition shall be accorded to any photocopy of an operator license; however, nothing in this section shall be construed to prohibit the photocopying for other purposes of any amateur radio operator license.

§ 97.83 Availability of station license.

The original license of each amateur station or a photocopy thereof shall be posted in a conspicuous place in the room occupied by the licensed operator while the station is being operated at a fixed location or shall be kept in his personal possession. When the station is operated at other than a fixed location, the original station license or a photocopy thereof shall be kept in the personal possession of the station licensee (or a licensed representative) who shall be present at the station while it is being operated as a portable or mobile station. The original station license shall be available for inspection by any authorized Government official at all times while the station is being operated and at other times upon request made by an authorized representative of the Commission, except when such license has been filed with application for modification or renewal thereof, or has been mutilated, lost, or destroyed, and request has been made for a duplicate license in accordance with §97.57.

§ 97.84 Station identification.

(a) An amateur station shall be identified by the transmission of its call sign at the beginning and end of each

single transmission or exchange of transmissions and at intervals not to exceed 10 minutes during any single transmission or exchange of transmissions of more than 10 minutes duration. Additionally, at the end of an exchange of telegraphy (other than teleprinter) or telephony transmissions between amateur stations, the call sign (or the generally accepted network identifier) shall be given for the station, or for at least one of the group of stations, with which communication was established.

(b) Under conditions when the control operator is other than the station licensee, the station identification shall be the assigned call sign for that station. However, when a station is operated within the privileges of the operator's class of license but which exceeds those of the station licensee, station identification shall be made by following the station call sign with the operator's primary station call sign (i.e. WN4XYZ/W4XX).

(c) An amateur radio station in repeater operation or a station in auxiliary operation used to relay automatically the signals of other stations in a system of stations shall be identified by radiotelephony or radiotelegraphy at a level of modulation sufficient to be intelligible through the repeated transmission at intervals not to exceed ten minutes.

(d) When an amateur radio station is in repeater or auxiliary operation, the following additional identifying information shall be transmitted:

(1) When identifying by radiotelephony, a station in repeater operation shall transmit the word "repeater" at the end of the station call sign. When identifying by radiotelegraphy, a station in repeater operation shall transmit the fraction bar $\overline{DN}$ followed by the letters "RPT" or "R" at the end of the station call sign. (The requirements of this subparagraph do not apply to stations having call signs prefixed by the letters "WR".)

(2) When identifying by radiotelephony, a station in auxillary operation shall transmit the word "auxiliary" at the end of the station call sign. When identifying by radiotelegraphy, a station in auxiliary operation shall transmit the fraction bar $\overline{DN}$ followed by the letters "AUX" or "A" at the end of the station call sign.

(e) A station in auxiliary operation may be identified by the call sign of its associated station.

(f) When operating under the authority of an Interim Amateur Permit with privileges authorized by the Permit, but which exceed the privileges of the licensee's permanent operator license, the station must be identified in the following manner:

(1) On radiotelephony, by the transmission of the station call sign, followed by the word "interim", followed by the special identifier shown on the Interim Permit;

(2) On radiotelegraphy, by the transmission of the station call sign, followed by the fraction bar $\overline{DN}$, followed by the special identifier shown on the interim permit.

(g) The identification required by this section shall be given on each frequency being utilized for transmission and shall be transmitted either by telegraphy using the international Morse code, or by telephony, using the English language. If the identification required by this section is made by an automatic device used only for identification by telegraphy, the code speed shall not exceed 20 words per minute. The Commission encourages the use of a nationally or internationally recognized standard phonetic alphabet as an aid for correct telephone identification.

§ 97.85 Repeater operation.

(a) Emissions from a station in repeater operation shall be discontinued within five seconds after cessation of radiocommunications by the user station. Provisions to limit automatically the access to a station in repeater operation may be incorporated but are not mandatory.

(b) Except for operation under automatic control, as provided in paragraph (e) of this section, the transmitting and receiving frequencies used by a station in repeater operation shall be continuously monitored by a control operator immediately before and during periods of operation.

(c) A station in repeater operation shall not concurrently retransmit amateur radio signals on more than one frequency in the same amateur frequency band, from the same location.

(d) A station in repeater operation shall be operated in a manner ensuring that it is not used for one-way communications, except as provided in §97.91.

(e) A station in repeater operation, either locally controlled or remotely controlled, may also be operated by automatic control when devices have been installed and procedures have been implemented to ensure compliance with the rules when a duty control operator is not present at a control point of the station. Upon notification by the Commission of improper operation of a station under automatic control, operation under automatic control shall be immediately discontinued until all deficiencies have been corrected.

§ 97.86 Auxiliary operation.

(a) A station in auxiliary operation, either locally controlled or remotely controlled, may also be operated by automatic control when it is operated as part of a system of stations in repeater operation operated under automatic control.

(b) If a station in auxiliary operation is relaying signals of another amateur radio station(s) to a station in repeater operation, the station in auxiliary operation may use an input (receiving) frequency in frequency bands reserved for auxiliary operation, repeater operation, or both.

(c) A station in auxiliary operation shall be used only to communicate with stations shown in the system network diagram.

§ 97.88 Operation of a station by remote control.

An amateur radio station may be operated by remote control only if there is compliance with the following:

(a) A photocopy of the remotely controlled station license shall be—

(1) posted in a conspicuous place at the remotely controlled transmitter location, and

(2) placed in the log of each authorized control operator.

(b) The name, address, and telephone number of the remotely controlled station licensee and at least one control operator shall be posted in a conspicuous place at the remotely controlled transmitter location.

(c) Except for operation under automatic control, a con-

trol operator shall be on duty when the station is being remotely controlled. Immediately before and during the periods the remotely controlled station is in operation, the frequencies used for emission by the remotely controlled station shall be monitored by the control operator. The control operator shall terminate all transmissions upon any deviation from the rules.

(d) Provisions must be incorporated to limit transmission to a period of no more than 3 minutes in the event of malfunction in the control link.

(e) A station in repeater operation shall be operated by radio remote control only when the control link uses frequencies other than the input (receiving) frequencies of the station in repeater operation.

§ 97.89 Points of Communications.

(a) Amateur stations may communicate with:

(1) Other amateur stations, excepting those prohibited by Appendix 2.

(2) Stations in other services licensed by the Commission and with U.S Government stations for civil defense purposes in accordance with Subpart F of this part, in emergencies and, on a temporary basis, for test purposes.

(3) Any station which is authorized by the Commission to communicate with amateur stations.

(b) Amateur stations may be used for transmitting signals, or communications, or energy, to receiving apparatus for the measurement of emissions, temporary observation of transmission phenomena, radio control of remote objects, and similar experimental purposes and for the purposes set forth in §97.91.

§ 97.91 One-way communications.

In addition to the experimental one-way transmission permitted by §97.89, the following kinds of one-way communications, addressed to amateur stations, are authorized and will not be construed as broadcasting: (a) Emergency communications, including bona fide emergency drill practice transmissions; (b) Information bulletins consisting solely of subject matter having direct interest to the amateur radio service as such; (c) Round-table discussions or net-type operations where more than two amateur stations are in communication, each station taking a turn at transmitting to other station(s) of the group; and (d) Code practice transmissions intended for persons learning or improving proficiency in the international Morse code.

§ 97.93 Modulation of carrier.

Except for brief tests or adjustments, an amateur radiotelephone station shall not emit a carrier wave on frequencies below 51 megahertz unless modulated for the purpose of communication. Single audiofrequency tones may be transmitted for test purposes of short duration for the development and perfection of amateur radio telephone equipment.

STATION OPERATION AWAY FROM AUTHORIZED LOCATION

§ 97.95 Operation away from the authorized fixed station location.

(a) Operation within the United States, its territories or possessions is permitted as follows:

(1) When there is no change in the authorized fixed operation station location, an amateur radio station, other than a military recreation station, may be operated portable or mobile under its station license anywhere in the United States, its territories or possessions, subject to §97.61.

(2) When the authorized fixed station location is changed, the licensee shall submit an application for modification of the station license in accordance with §97.47.

(b) When outside the continental limits of the United States, its territories, or possessions, an amateur radio station may be operated as portable or mobile only under the following conditions:

(1) Operation may not be conducted within the jurisdiction of a foreign government except pursuant to, and in accordance with express authority granted to the licensee by such foreign government. When a foreign government permits Commission licensees to operate within its territory, the amateur frequency bands which may be used shall be as prescribed or limited by that government. (See Appendix 4 of this Part for the text of treaties or agreements between the United States and foreign governments relative to reciprocal amateur radio operation.)

(2) When outside the jurisdiction of a foreign government, amateur operation may be conducted within ITU Region 2 subject to the limitations of, and on those frequency bands listed in, §97.61.

(3) When outside the jurisdiction of a foreign government, amateur operation may be conducted within ITU Regions 1 and 3 on the following frequencies, subject to the limitations and provisions of Section IV of Article 5 of the Radio Regulations of the ITU:

(i)	REGION 1	REGION 3
	3.5-3.8 MHz	1.8-2.0 MHz
	7.0-7.1 MHz	3.5-3.9 MHz
	14.0-14.35 MHz	7.0-7.1 MHz
	21.0-21.45 MHz	14.0-14.35 MHz
	28.0-29.7 MHz	21.0-21.45 MHz
	144-146 MHz	28.0-29.7 MHz
	430-440 MHz	50.0-54.0 MHz
	1215-1300 MHz	144-148 MHz
	2300-2450 MHz	420-450 MHz
		1215-1300 MHz
		2300-2450 MHz

(ii) Operation on amateur frequency bands above 2450 MHz may be conducted subject to the limitations and provisions of Section IV of Article 5 of the Radio Regulations of the ITU.

(4) Except as otherwise provided, amateur operation conducted outside the jurisdiction of a foreign government shall comply with all requirements of Part 97 of this Chapter.

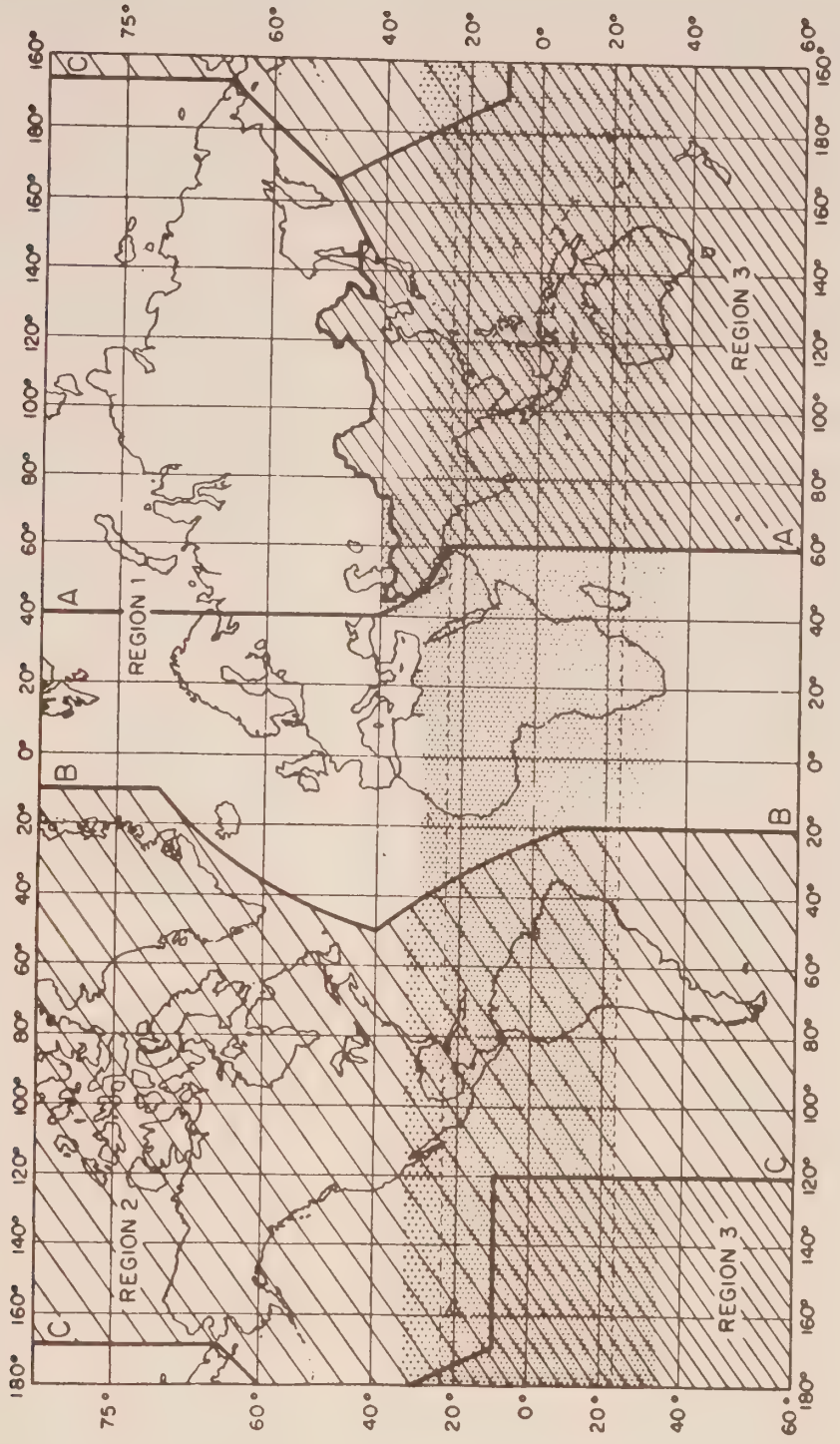
SPECIAL PROVISIONS

§ 97.99 Stations used only for radio control of remote model crafts and vehicles.

An amateur transmitter when used for the purpose of

Section 97.95

CHART OF ITU REGIONS



transmitting radio signals intended only for the control of a remote model craft or vehicle and having mean output power not exceeding one watt may be operated under the special provisions of this section provided an executed Transmitter Identification Card (FCC Form 452-C) or a plate made of a durable substance indicating the station call sign and licensee's name and address is affixed to the transmitter.

(a) Station identification is not required for transmissions directed only to a remote model craft or vehicle.

(b) Transmissions containing only control signals directed only to a remote model craft or vehicle are not considered to be codes or ciphers in the context of the meaning of §97.117.

(c) Station logs need not indicate the times of commencing and terminating each transmission or series of transmissions.

§ 97.101 Mobile stations aboard ships or aircraft.

In addition to complying with all other applicable rules, an amateur mobile station operated on board a ship or aircraft must comply with all of the following special conditions: (a) The installation and operation of the amateur mobile station shall be approved by the master of the ship or captain of the aircraft; (b) The amateur mobile station shall be separate from and independent of all other radio equipment, if any, installed on board the same ship or aircraft; (c) The electrical installation of the amateur mobile station shall be in accord with the rules applicable to ships or aircraft as promulgated by the appropriate government agency; (d) The operation of the amateur mobile station shall not interfere with the efficient operation of any other radio equipment installed on board the same ship or aircraft; and (e) The amateur mobile station and its associated equipment, either in itself or in its method of operation, shall not constitute a hazard to the safety of life or property.

LOGS

§ 97.103 Station log requirements.

An accurate legible account of station operation shall be entered into a log for each amateur radio station. The following items shall be entered as a minimum:

(a) The call sign of the station, the signature of the station licensee, or a photocopy of the station license.

(b) The locations and dates upon which fixed operation of the station was initiated and terminated. If applicable, the location and dates upon which portable operation was initiated and terminated at each location.

(1) The date and time periods the duty control operator for the station was other than the station licensee, and the signature and primary station call sign of that duty control operator.

(2) A notation of third party traffic sent or received, including names of all third parties, and a brief description of the traffic content. This entry may be in a form other than written, but one which can be readily transcribed by the licensee into written form.

(3) Upon direction of the Commission, additional information as directed shall be recorded in the station log.

(c) In addition to the other information required by this section, the log of a remotely controlled station shall have entered the names, addresses, and call signs of all authorized control operators and a functional block diagram of, and a technical explanation sufficient to describe the operation of the control link. Additionally, the following information shall be entered:

(1) A description of the measures taken for protection against access to the remotely controlled station by unauthorized persons;

(2) A description of the measures taken for protection against unauthorized station operation, either through activation of the control link, or otherwise;

(3) A description of the provisions for shutting down the station in the case of control link malfunction; and

(4) A description of the means used for monitoring the transmitting frequencies.

(d) When a station has one or more associated stations, that is, stations in repeater or auxiliary operation, a system network diagram shall be entered in the station log.

(e) In addition to the other information required by this section, the log of a station in repeater operation transmitting with an effective radiated power greater than the minimum effective radiated power listed in §97.67(c) for the frequency band in use shall contain the following:

(1) The location of the station transmitting antenna, marked upon a topographic map having a scale of 1:250,000 and contour intervals[1];

(2) The antenna transmitting height above average terrain[2];

(3) The effective radiated power in the horizontal plane for the main lobe of the antenna pattern, calculated for maximum transmitter output power;

(4) The transmitter output power;

(5) The loss in the transmission line between the transmitter and the antenna, expressed in decibels;

(6) The relative gain in the horizontal plane of the transmitting antenna; and

(7) The horizontal and vertical radiation patterns of the transmitting antenna, with reference to true north (for horizontal pattern only), upon polar coordinate graph paper, and the method used in determining these patterns.

(f) In addition to the other information required by this section, the log of a station in auxiliary operation shall have the following information entered:

(1) A system network diagram for each system with which the station is associated;

(2) The station transmitting band(s);

(3) The transmitter input power; and

(4) If operated by remote control, the information required by paragraph (c) of this section.

(g) Notwithstanding the provisions of §97.105, the log entries required by paragraphs (c), (d), (e), and (f) of this section shall be retained in the station log as long as the information contained in those entries is accurate.

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[1]Indexes and ordering information for suitable maps are available from the U.S. Geological Survey, Washington, D.C. 20242, or from the Federal Center, Denver, Colorado 80255.

[2]See Appendix 5.

§ 97.105 Retention of logs.

The station log shall be preserved for a period of at least 1 year following the last date of entry and retained in the possession of the licensee. Copies of the log, including the sections required to be transcribed by §97.103, shall be available to the Commission for inspection.

EMERGENCY OPERATIONS

§ 97.107 Operation in emergencies.

In the event of an emergency disrupting normally available communication facilities in any widespread area or areas, the Commission, in its discretion, may declare that a general state of communications emergency exists, designate the area or areas concerned, and specify the amateur frequency bands, or segments of such bands, for use only by amateurs participating in emergency communication within or with such affected area or areas. Amateurs desiring to request the declaration of such a state of emergency should communicate with the Commission's Engineer in Charge of the area concerned. Whenever such declaration has been made, operation of and with amateur stations in the area concerned shall be only in accordance with the requirements set forth in this section, but such requirements shall in nowise affect other normal amateur communication in the affected area when conducted on frequencies not designated for emergency operation.

(a) All transmissions within all designated amateur communications bands[1] other than communications relating directly to relief work, emergency service, or the establishment and maintenance of efficient amateur radio networks for the handling of such communications shall be suspended. Incidental calling, answering, testing or working (including casual conversations, remarks or messages) not pertinent to constructive handling of the emergency situation shall be prohibited within these bands.

(b) The Commission may designate certain amateur stations to assist in the promulgation of information relating to the declaration of a general state of communications emergency, to monitor the designated amateur emergency communications bands, and to warn non-complying stations observed to be operating in those bands. Such station, when so designated, may transmit for that purpose on any frequency or frequencies authorized to be used by that station, provided such transmissions do not interfere with essential emergency communications in progress; however, such transmissions shall preferably be made on authorized frequencies immediately adjacent to those segments of the amateur bands being cleared for the emergency. Individual transmissions for the purpose of advising other stations of the existence of the communications emergency shall refer to this section by number (§97.107) and shall specify, briefly and concisely, the date of the Commission's declaration, the area and nature of the emergency, and the amateur frequency bands or segments of such bands which constitute the amateur emergency communications bands at the time. The designated stations shall not enter into discussions with other stations beyond furnishing essential facts relative to the emergency, or acting as advisors to stations desiring to assist in the emergency, and the operators of such designated stations shall report fully to the Commission the identity of any stations failing to comply, after notice, with any of the pertinent provisions of this section.

(c) The special conditions imposed under the provisions of this section shall cease to apply only after the Commission or its authorized representative, shall have declared such general state of communications emergency to be terminated: however, nothing in this paragraph shall be deemed to prevent the Commission from modifying the terms of its declaration from time to time as may be necessary during the period of a communications emergency, or from removing those conditions with respect to any amateur frequency band or segment of such band which no longer appears essential to the conduct of the emergency communications.

SUBPART E—PROHIBITED PRACTICES AND ADMINISTRATIVE SANCTIONS

PROHIBITED TRANSMISSIONS AND PRACTICES

§ 97.112 No remuneration for use of station.

(a) An amateur station shall not be used to transmit or receive messages for hire, nor for communication for material compensation, direct or indirect, paid or promised.

(b) Control operators of a club station may be compensated when the club station is operated primarily for the purpose of conducting amateur radiocommunication to provide telegraphy practice transmissions intended for persons learning or improving proficiency in the international Morse code, or to disseminate information bulletins consisting solely of subject matter having direct interest to the Amateur Radio Service provided:

(1) The station conducts telegraphy practice and bulletin transmission for at least 40 hours per week.

(2) The station schedules operations on all allocated medium and high frequency amateur bands using reasonable measures to maximize coverage.

(3) The schedule of normal operating times and frequencies is published at least 30 days in advance of the actual transmissions.

Control operators may accept compensation only for such periods of time during which the station is transmitting telegraphy practice or bulletins. A control operator shall not accept any direct or indirect compensation for periods during which the station is transmitting material other than telegraphy practice or bulletins.

§ 97.113 Broadcasting prohibited.

Subject to the provisions of §97.91, an amateur station shall not be used to engage in any form of broadcasting, that is, the dissemination of radio communications intended to be received by the public directly or by the intermediary of relay stations, nor for the retransmission by automatic means of programs or signals emanating from any class of station other than amateur. The foregoing provisions shall not be construed to prohibit amateur operators from giving their consent to the rebroadcast by broadcast stations of the

[1]The frequency 4383.8 kHz may be used by any station authorized under this part to communicate with any other station in the State of Alaska for emergency communications. No airborne operations will be permitted on this frequency. Additionally, all stations operating on this frequency must be located in or within 50 nautical miles of the State of Alaska.

transmissions of their amateur stations, provided, that the transmissions of the amateur stations shall not contain any direct or indirect reference to the rebroadcast.

§ 97.114 Third party traffic.

The transmission or delivery of the following amateur radiocommunication is prohibited:

(a) International third party traffic except with countries which have assented thereto.

(b) Third party traffic involving material compensation, either tangible or intangible, direct or indirect, to a third party, a station licensee, a control operator, or any other person.

(c) Except for an emergency communication as defined in this part, third party traffic consisting of business communications on behalf of any party. For the purpose of this section business communication shall mean any transmission or communication the purpose of which is to facilitate the regular business or commercial affairs of any party.

§ 97.115 Music prohibited.

The transmission of music by an amateur station is forbidden.

§ 97.116 Amateur radiocommunication for unlawful purposes prohibited.

The transmission of radiocommunication or messages by an amateur radio station for any purpose, or in connection with any activity, which is contrary to Federal, State or local law is prohibited.

§ 97.117 Codes and ciphers prohibited.

The transmission by radio of messages in codes or ciphers in domestic and international communications to or between amateur stations is prohibited. All communications regardless of type of emission employed shall be in plain language except that generally recognized abbreviations established by regulation or custom and usage are permissible as are any other abbreviations or signals where the intent is not to obscure the meaning but only to facilitate communications.

§ 97.119 Obscenity, indecency, profanity.

No licensed radio operator or other person shall transmit communications containing obscene, indecent, or profane words, language, or meaning.

§ 97.121 False signals.

No licensed radio operator shall transmit false or deceptive signals or communications by radio, or any call letter or signal which has not been assigned by proper authority to the radio station he is operating.

§ 97.123 Unidentified communications.

No licensed radio operator shall transmit unidentified radio communications or signals.

§ 97.125 Interference.

No licensed radio operator shall willfully or maliciously interfere with or cause interference to any radio communication or signal.

§ 97.126 Retransmitting radio signals.

(a) An amateur radio station, except a station in repeater operation or auxiliary operation, shall not automatically retransmit the radio signals of other amateur radio stations.

(b) A remotely controlled station, other than a remotely controlled station in repeater operation or auxiliary operation, shall automatically retransmit only the radio signals of stations in auxiliary operation shown on the remotely controlled station's system network diagram.

§ 97.127 Damage to apparatus.

No licensed radio operator shall willfully damage, or cause or permit to be damaged, any radio apparatus or installation in any licensed radio station.

§ 97.129 Fraudulent licenses.

No licensed radio operator or other person shall obtain or attempt to obtain, or assist another to obtain or attempt to obtain, an operator license by fraudulent means.

ADMINISTRATIVE SANCTIONS

§ 97.131 Restricted operation.

(a) If the operation of an amateur station causes general interference to the reception of transmissions from stations operating in the domestic broadcast service when receivers of good engineering design including adequate selectivity characteristics are used to receive such transmission and this fact is made known to the amateur station licensee, the amateur station shall not be operated during the hours from 8 p.m. to 10:30 p.m., local time, and on Sunday for the additional period from 10:30 a.m. until 1 p.m., local time, upon the frequency or frequencies used when the interference is created.

(b) In general, such steps as may be necessary to minimize interference to stations operating in other services may be required after investigation by the Commission.

§ 97.133 Second notice of same violation.

In every case where an amateur station licensee is cited within a period of 12 consecutive months for the second violation of the provisions of §§97.61, 97.63, 97.65, 97.71, or 97.73, the station licensee, if directed to do so by the Commission, shall not operate the station and shall not permit it to be operated from 6 p.m. to 10:30 p.m., local time, until written notice has been received authorizing the resumption of full-time operation. This notice will not be issued until the licensee has reported on the results of tests which he has conducted with at least two other amateur stations at hours other than 6 p.m. to 10:30 p.m., local time. Such tests are to be made for the specific purpose of aiding the licensee in determining whether the emissions of the station are in accordance with the Commission's rules. The licensee shall report to the Commission the observations made by the cooperating amateur licensee in relation to reported violations. This report shall include a statement as to the corrective measures taken to insure compliance with the rules.

§ 97.135 Third notice of same violation.

In every case where an amateur station licensee is cited within a period of 12 consecutive months for the third violation of §97.61, 97.63, 97.65, 97.71, or 97.73, the station licensee, if directed by the Commission, shall not operate the station and shall not permit it to be operated from 8 a.m. to 12 midnight, local time, except for the purpose of transmitting a prearranged test to be observed by a monitoring station of the Commission to be designated in each particular case. The station shall not be permitted to resume operation during these hours until the licensee is authorized by the Commission, following the test, to resume full-time operation. The results of the test and the licensee's record shall be considered in determining the advisability of suspending the operator license or revoking the station license, or both.

§ 97.137 Answers to notices of violations.

Any licensee receiving official notice of a violation of the terms of the Communications Act of 1934, as amended, any legislative act, Executive order, treaty to which the United States is a party, or the rules and regulations of the Federal Communications Commission, shall, within 10 days from such receipt, send a written answer direct to the office of the Commission originating the official notice: *Provided, however,* That if an answer cannot be sent or an acknowledgement made within such 10-day period by reason of illness or other unavoidable circumstances, acknowledgement and answer shall be made at the earliest practicable date with a satisfactory explanation of the delay. The answer to each notice shall be complete in itself and shall not be abbreviated by reference to other communications or answers to other notices. If the notice relates to some violation that may be due to the physical or electrical characteristics of transmitting apparatus, the answer shall state fully what steps, if any, are taken to prevent future violations, and if any new apparatus is to be installed, the date such apparatus was ordered, the name of the manufacturer, and promised date of delivery. If the notice of violation relates to some lack of attention to or improper operation of the transmitter, the name of the operator in charge shall be given.

SUBPART F—RADIO AMATEUR CIVIL EMERGENCY SERVICE (RACES)

GENERAL

§ 97.161 Basis and purpose.

The Radio Amateur Civil Emergency Service provides for amateur radio operation for civil defense communications purposes only, during periods of local, regional or national civil emergencies, including any emergency which may necessitate invoking of the President's War Emergency Powers under the provisions of section 606 of the Communications Act of 1934, as amended.

§ 97.163 Definitions.

For the purposes of this Subpart, the following definitions are applicable:

(a) *Radio Amateur Civil Emergency Service.* A radiocommunication service conducted by volunteer licensed amateur radio operators, for providing emergency radiocommunications to local, regional, or state civil defense organizations.

(b) *RACES station.* An amateur radio station licensed to a civil defense organization, at a specific land location, for the purpose of providing the facilities for amateur radio operators to conduct amateur radiocommunications in the Radio Amateur Civil Emergency Service.

§ 97.165 Applicability of rules.

In all cases not specifically covered by the provisions contained in this Subpart, amateur radio stations and RACES stations shall be governed by the provisions of the rules governing amateur radio stations and operators (Subpart A through E of this part).

STATION AUTHORIZATIONS

§ 97.169 Station license required.

No transmitting station shall be operated in the Radio Amateur Civil Emergency Service unless:

(a) The station is licensed as a RACES station by the Federal Communications Commission, or

(b) The station is an amateur radio station licensed by the Federal Communications Commission, and is certified by the responsible civil defense organization as registered with that organization.

§ 97.171 Eligibility for RACES station license.

A RACES station will only be licensed to a local, regional, or state civil defense organization.

§ 97.173 Application for RACES station license.

(a) Each application for a RACES station license shall be made on the FCC Form 610-B.

(b) The application shall be signed by the civil defense official responsible for the coordination of all civil defense activities in the area concerned.

(c) The application shall be countersigned by the responsible official for the governmental entity served by the civil defense organization.

(d) If the application is for a RACES station to be in any special manner covered by §97.41, those showings specified for non-RACES stations shall also be submitted.

§ 97.175 Amateur radio station registration in civil defense organization.

No amateur radio station shall be operated in the Radio Amateur Civil Emergency Service unless it is certified as registered in a civil defense organization by that organization.

OPERATING REQUIREMENTS

§ 97.177 Operator requirements.

No person shall be the control operator of a RACES station, or shall be the control operator of an amateur radio station conducting communications in the Radio Amateur Civil Emergency Service unless that person holds a valid amateur radio operator license and is certified as enrolled in

a civil defense organization by that organization.

§ 97.179 Operator privileges.

Operator privileges in the Radio Amateur Civil Emergency Service are dependent upon, and identical to, those for the class of operator license held in the Amateur Radio Service.

§ 97.181 Availability of RACES station license and operator licenses.

(a) The original license of each RACES station, or a photocopy thereof, shall be attached to each transmitter of such station, and at each control point of such station. Whenever a photocopy of the RACES station license is utilized in compliance with this requirement, the original station license shall be available for inspection by any authorized Government official at all times while the station is being operated and at other times upon request made by an authorized representative of the Commission, except when such license has been filed with application for modification or renewal thereof, or has been mutilated, lost, or destroyed, and request has been made for a duplicate license in accordance with §97.57.

(b) In addition to the operator license availability requirements of §97.82, a photocopy of the control operator's amateur radio operator license shall be posted at a conspicuous place at the control point for the RACES station.

TECHNICAL REQUIREMENTS

§ 97.185 Frequencies available.

(a) All of the authorized frequencies and emissions allocated to the Amateur Radio Service are also available to the Radio Amateur Civil Emergency Service on a shared basis.

(b) In the event of an emergency which necessitates the invoking of the President's War Emergency Powers under the provisions of §606 of the Communications Act of 1934 as amended, unless otherwise modified or directed, RACES stations and amateur radio stations participating in RACES will be limited in operation to the following:

FREQUENCY OR FREQUENCY BANDS

	Limitations
kHz:	
1800-1825	1
1975-2000	1
3500-3510	
3510-3516	4
3516-3550	2,4
3984-4000	
3997	3
7097-7103	4
7103-7125	2,4
7245-7255	2,4
14047-14053	4
14220-14230	2,4
21047-21053	4
MHz:	
28.55-28.75	
29.45-29.65	
50.35-50.75	
53.30	3
53.35-53.75	
145.17-145.71	
146.79-147.33	
220-225	5

(c) Limitations: (1) Use of frequencies in the band 1800-2000 kHz is subject to the priority of the LORAN system of radionavigation in this band and to the geographical, frequency, emission, and power limitations contained in §97.61 governing amateur radio stations and operators (Subparts A through E of this part).

(2) The availability of the frequency bands 3515-3550 kHz, 7103-7125 kHz, 7245-7247 kHz, 7253-7255 kHz, 14220-14222 kHz, and 14228-14230 kHz for use during periods of actual civil defense emergency is limited to the initial 30 days of such emergency, unless otherwise ordered by the Commission.

(3) For use in emergency areas when required to make initial contact with a military unit; also, for communications with military stations on matters requiring coordinations.

(4) For use by all authorized stations only in the continental United States, except that the bands 7245-7255 kHz and 14220-14230 kHz are also available in Alaska, Hawaii, Puerto Rico, and the Virgin Islands.

(5) Those stations operating in the band 220-225 MHz shall not cause harmful interference to the government radiolocation service.

§ 97.189 Point of communications.

(a) RACES stations may only be used to communicate with:

(1) Other RACES stations;

(2) Amateur radio stations certified as being registered with a civil defense organization, by that organization;

(3) Stations in the Disaster Communications Service;

(4) Stations of the United States Government authorized by the responsible agency to exchange communications with RACES stations;

(5) Any other station in any other service regulated by the Federal Communications Commission, whenever such station is authorized by the Commission, to exchange communications with stations in the Radio Amateur Civil Emergency Service.

(b) Amateur radio stations registered with a civil defense organization may only be used to communicate with:

(1) RACES stations licensed to the civil defense organization with which the amateur radio station is registered:

(2) Any of the following stations upon authorization of the responsible civil defense official for the organization in which the amateur radio station is registered:

(i) Any RACES station licensed to other civil defense organizations;

(ii) Amateur radio stations registered with the same or another civil defense organization;

(iii) Stations in the Disaster Communications Service;

(iv) Stations of the United States Government authorized by the responsible agency to exchange communications with RACES stations;

(v) Any other station in any other service regulated by the Federal Communications Commission, whenever such station is authorized by the Commission to exchange communications with stations in the Radio Amateur Civil Emergency Service.

§ 97.191 Permissible communications.

All communications in the Radio Amateur Civil Emergency Service must be specifically authorized by the civil defense organization for the area served. Stations in this service may transmit only civil defense communications of the following types:

(a) Communications concerning impending or actual conditions jeopardizing the public safety, or affecting the national defense or security during periods of local, regional, or national civil emergencies:

(1) Communications directly concerning the immediate safety of life or individuals, the immediate protection of property, maintenance of law and order, alleviation of human suffering and need, and the combating of armed attack or sabotage;

(2) Communications directly concerning the accumulation and dissemination of public information or instructions to the civilian population essential to the activities of the civil defense organization or other authorized governmental or relief agencies.

(b) Communications for training drills and tests necessary to ensure the establishment and maintenance of orderly and efficient operation of the Radio Amateur Civil Emergency Service as ordered by the responsible civil defense organization served. Such tests and drills may not exceed a total time of one hour per week.

(c) Brief one way transmissions for the testing and adjustment of equipment.

§ 97.193 Limitations on the use of RACES stations.

(a) No station in the Radio Amateur Civil Emergency Service shall be used to transmit or to receive messages for hire, nor for communications for material compensation, direct or indirect, paid or promised.

(b) All messages which are transmitted in connection with drills or tests shall be clearly identified as such by use of the words "drill" or "test", as appropriate, in the body of the messages.

SUBPART G—OPERATION OF AMATEUR RADIO STATIONS IN THE UNITED STATES BY ALIENS PURSUANT TO RECIPROCAL AGREEMENTS

§ 97.301 Basis, purpose, and scope.

(a) The rules in this subpart are based on, and are applicable solely to, alien amateur operations pursuant to section 303(1)(3) and 310(a) of the Communications Act of 1934, as amended. (See Pub. L. 93-505, 88 Stat. 1576.)

(b) The purpose of this subpart is to implement Public Law 88-313 by prescribing the rules under which an alien, who holds an amateur operator and station license issued by his government (hereafter referred to as an alien amateur), may operate an amateur radio station in the United States, in its possessions, and in the Commonwealth of Puerto Rico (hereafter referred to only as the United States).

§ 97.303 Permit required.

(a) Before he may operate an amateur radio station in the United States, under the provisions of sections 303(1)(2) and 310(a) of the Communications Act of 1934, as amended, an alien amateur licensee must obtain a permit for such operation from the Federal Communications Commission. A permit for such operation shall be issued only to an alien holding a valid amateur operator and station authorization from his government, and only when there is in effect a bilateral agreement between the United States and that government for such operation on a reciprocal basis by United States amateur radio operators.

§ 97.305 Application for permit.

(a) Application for a permit shall be made on FCC Form 610-A. Form 610-A may be obtained from the Commission's Washington, D.C., office, from any of the Commission's field offices and, in some instances, from United States missions abroad.

(b) The application form shall be completed in full in English and signed by the applicant. A photocopy of the applicant's amateur operator and station license issued by his government shall be filed with the application. The Commission may require the applicant to furnish additional information. The application must be filed by mail or in person with the Federal Communications Commission, Gettysburg, Pennsylvania 17325, U.S.A. To allow sufficient time for processing, the application should be filed at least 60 days before the date on which the applicant desires to commence operation.

§ 97.307 Issuance of permit.

(a) The Commission may issue a permit to an alien amateur under such terms and conditions as it deems appropriate. If a change in the terms of a permit is desired, an application for modification of the permit is required. If operation beyond the expiration date of a permit is desired, an application for renewal of the permit is required. In any case in which the permittee has, in accordance with the provisions of this subpart, made a timely and sufficient application for renewal of an unexpired permit, such permit shall not expire until the application has been finally determined. Applications for modification or for renewal of a permit shall be filed on FCC Form 610-A.

(b) The Commission, in its discretion may deny any application for a permit under this subpart. If an application is denied, the applicant will be notified by letter. The applicant may, within 90 days of the mailing of such letter, request the Commission to reconsider its action.

(c) Normally, a permit will be issued to expire 1 year after issuance but in no event after the expiration of the license issued to the alien amateur by his government.

§ 97.309 Modification, suspension, or cancellation of permit.

At any time the Commission may, in its discretion, modify, suspend, or cancel any permit issued under this subpart. In this event, the permittee will be notified of the Commission's action by letter mailed to his mailing address in the United States and the permittee shall comply immediately. A permittee may, within 90 days of the mailing of such letter, request the Commission to reconsider its action. The filing of a request for reconsideration shall not stay the effectiveness of that action, but the Commission may stay its action on its own motion.

§ 97.311 Operating conditions.

(a) The alien amateur may not under any circumstances begin operation until he has received a permit issued by the Commission.

(b) Operation of an amateur station by an alien amateur under a permit issued by the Commission must comply with all of the following:

(1) The terms of the bilateral agreement between the alien amateur's government and the government of the United States;

(2) The provisions of this subpart and of Subparts A through E of this part;

(3) The operating terms and conditions of the license issued to the alien amateur by his government; and

(4) Any further conditions specified on the permit issued by the Commission.

§ 97.313 Station identification.

(a) The alien amateur shall identify his station as follows:

(1) Radio telegraph operation: The amateur shall transmit the call sign issued to him by the licensing country followed by a slant (/) sign and the United States amateur call sign prefix letter(s) and number appropriate to the location of his station.

(2) Radiotelephone operation: The amateur shall transmit the call sign issued to him by the licensing country followed by the words "fixed", "portable" or "mobile", as appropriate, and the United States amateur call sign prefix letter(s) and number appropriate to the location of his station. The identification shall be made in the English language.

(b) At least once during each contact with another amateur station, the alien amateur shall indicate, in English, the geographical location of his station as nearly as possible by city and state, commonwealth, or possession.

SUBPART H—(RESERVED)

APPENDICES

APPENDIX 1

EXAMINATION POINTS

Examinations for amateur radio operator licenses are conducted at the Commission's office in Washington, D.C., and at each field office of the Commission on the days designated by the Engineer in Charge of each office. Specific dates should be obtained from the Engineer in Charge of the nearest field office of the Commission.

Examinations are also given at prescribed intervals in the cities listed in the Commission's current Examination Schedule, copies of which are available from the Federal Communications Commission Regional Services Division, Washington, D.C. 20554, or from any one of the Commission's field offices listed in §0.121.

APPENDIX 2

Extracts From Radio Regulations Annexed to the International Telecommunication Convention (Geneva, 1959)

ARTICLE 41—AMATEUR STATIONS

SECTION 1. Radiocommunications between amateur stations of different countries[1] shall be forbidden if the administration of one of the countries concerned has notified that it objects to such radiocommunications.

SEC. 2.(1) When transmissions between amateur stations of different countries are permitted, they shall be made in plain language and shall be limited to messages of a technical nature relating to tests and to remarks of a personal character for which, by reason of their unimportance, recourse to the public telecommunications service is not justified. It is absolutely forbidden for amateur stations to be used for transmitting international communications on behalf of third parties.

(2) The preceding provisions may be modified by special arrangements between the administration of the countries concerned.

SEC. 3(1) Any person operating the apparatus of an amateur station shall have proved that he is able to send correctly by hand and to receive correctly by ear, texts in Morse code signals. Administrations concerned may, however, waive this requirement in the case of stations making use exclusively of frequencies above 144 MHz.

(2) Administrations shall take such measures as they judge necessary to verify the technical qualifications of any person operating the apparatus of an amateur station.

SEC. 4. The maximum power of amateur stations shall be fixed by the administrations concerned, having regard to the technical qualifications of the operators and to the conditions under which these stations are to work.

SEC. 5. (1) All the general rules of the Convention and of these Regulations shall apply to amateur stations. In particular, the emitted frequency shall be as stable and as free from spurious emissions as the state of technical development for such stations permits.

(2) During the course of their transmissions, amateur stations shall transmit their call sign at short intervals.

RESOLUTION NO. 10

Relating to the use of the bands 7000 to 7100 kHz and 7100 to 7300 kHz by the Amateur Service and the Broadcasting Service.

The Administrative Radio Conference Geneva, 1959,

Considering—

(a) That the sharing of frequency bands by amateur, fixed, and broadcasting services is undesirable and should be avoided;

(b) That it is desirable to have worldwide exclusive allocations for these services in Band 7;

(c) That the band 7000 to 7100 kHz is allocated on a worldwide basis exclusively to the amateur service;

(d) That the band 7100 to 7300 kHz is allocated in Regions 1 and 3 to the broadcasting service and in Region 2 to the amateur service;

resolves,

that the broadcasting service should be prohibited from the band 7000 to 7100 kHz and that broadcasting stations operating on frequencies in this band should cease such operation;

and noting,

the provisions of No. 117 of the Radio Regulations;

further resolves,

that interregional amateur contacts should be only in the band 7000 to 7100 kHz and that the administrations should make every effort to ensure that the broadcasting service in the band 7100 to 7300 kHz, in Regions 1 and 3, does not cause interference to the amateur service in Region 2; such being consistent with the provisions of No. 117 of the Radio Regulations.

APPENDIX 3

CLASSIFICATION OF EMISSIONS

For convenient reference the tabulation below is extracted from the classification of typical emissions in Part 2 of the Commission's Rules and Regulations and in the Radio Regulations, Geneva, 1959, and it includes only those general classifications which appear most applicable to the Amateur Radio Service.

Type of modulation	Type of transmission	Symbol
Amplitude	With no modulation	A0
	Telegraph without the use of modulating audio frequency (by on-off keying)	A1
	Telegraphy by the on-off keying of an amplitude modulating audio frequency or audio frequencies or by the on-off keying of the	A2

	modulated emission (special case; an unkeyed emission amplitude modulated). ---	
	Telephony ----------	A3[1]
	Facsimile ----------	A4
	Television----------	A5
Frequency (or phase).	Telegraphy by frequency shift keying without the use of a modulating audio frequency.---------	F1
	Telegraphy by the on-off keying of a frequency modulating audio frequency or by the on-off keying of frequency modulated emission (special case; an unkeyed emission frequency modulated). ----------	F2
	Telephony ----------	F3
	Facsimile ----------	F4
	Television----------	F5
Pulse ----------		P

[1](In Part 97) Unless specified otherwise, A3 includes single and double sideband with full, reduced, or suppressed carrier.

APPENDIX 4

Convention Between the United States of America and Canada, Relating to the Operation by Citizens of Either Country of Certain Radio Equipment or Stations in the Other Country (Effective May 15, 1952)

ARTICLE III

It is agreed that persons holding appropriate amateur licenses issued by either country may operate their amateur stations in the territory of the other country under the following conditions:

(a) Each visiting amateur may be required to register and receive a permit before operating any amateur station licensed by his government.

(b) The visiting amateur will identify his station by:

(1) *Radiotelegraphy operation.* The amateur call sign issued to him by the licensing country followed by a slant (/) sign and the amateur call sign prefix and call area number of the country he is visiting.

(2) *Radiotelephone operation.* The amateur call sign in English issued to him by the licensing country followed by the words, "fixed" "portable" or "mobile," as appropriate, and the amateur call sign prefix and call area number of the country he is visiting.

(c) Each amateur station shall indicate at least once during each contact with another station its geographical location as nearly as possible by city and state or city and province.

(d) In other respects the amateur station shall be operated in accordance with the laws and regulations of the country in which the station is temporarily located.

APPENDIX 5

DETERMINATION OF ANTENNA HEIGHT ABOVE AVERAGE TERRAIN

The effective height of the transmitting antenna shall be the height of the antenna's center of radiation above "average terrain." For this purpose "effective height" shall be established as follows:

(a) On a U.S. Geological Survey Map having a scale of 1:250,000, lay out eight evenly spaced radials, extending from the transmitter site to a distance of 10 miles and beginning at (0°, 45°, 90°, 135°, 180°, 225°, 270°, 315°T.) If preferred, maps of greater scale may be used.

(b) By reference to the map contour lines, establish the ground elevation above mean sea level (AMSL) at 2, 4, 6, 8, and 10 miles from the antenna structure along each radial. If no elevation figure or contour line exists for any particular point, the nearest contour line elevation shall be employed.

(c) Calculate the arithmetic average of these 40 points of elevation (5 points of each of 8 radials).

(d) The height above average terrain of the antenna is thus the height AMSL of the antenna's center of radiation, minus the height of average terrain as calculated above.

NOTE 1: Where the transmitter is located near a large body of water, certain points of established elevation may fall over water. Where it is expected that service would be provided to land areas beyond the body of water, the points at water level in that direction should be included in the calculation of average elevation. Where it is expected that service would not be provided to land areas beyond the body of water, the points at water level should not be included in the average.

NOTE 2: In instances in which this procedure might provide unreasonable figures due to the unusual nature of the local terrain, applicant may provide additional data at his own discretion, and such data may be considered if deemed significant.

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[1]As may appear in public notices issued by the Commission.

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